

R E M A R K S

This is in response to the Office Action that was mailed on November 30, 2004. Claims 1-8 are pending in the application.

It is respectfully submitted that the Office Action embodies a misunderstanding of the present invention and of the two cited references. For instance, on page 2 of the Office Action, it is alleged that "The polyolefin prearms can be produced by anionic polymerization technique in the presence of Ziegler-Natta catalyst, column 6, line 22. The polyolefin pre-arms may contain a small amount of a functional ethylenically unsaturated monomer such as a maleic anhydride or (meth)acrylate ester, column 7, lines 10-25 and column 15, lines 48-67." (Emphasis supplied.) This understanding is incorrect. The correct statement would be "the polyolefin backbone may contain a small amount of a functional ethylenically unsaturated monomer". The description in lines 10-25 in column 7 of the Janssen reference concerns only the copolymerization of terminal unsaturated pre-arms with a small amount of functional monomers, not the method of manufacturing pre-arms. Accordingly, the polymer unit which may contain a hetero-atom originating from maleic anhydride or (meth)acrylate is the polyolefin **backbone**, and not the polyolefin pre-arm.

Claims 1-8 were rejected under 35 U.S.C. §102(b) as being anticipated by US 6,127,481 (Janssen). The rejection is respectfully traversed.

A very significant difference between the branched olefin copolymer of the present invention and the polyolefin disclosed by Janssen relates to the definition of the "arm-structure" in the branched polyolefin. In the present invention, the arm depicted as "Z" in formula (2) is a polymer segment containing at least one feature selected from an oxygen atom, a nitrogen atom, a halogen atom, and an aryl group. In Janssen, the corresponding arms are copolymers of ethylene with propylene. See e.g. column 3, lines 51-63 of the Janssen disclosure. In other words, the arms disclosed by Janssen are aliphatic groups that consist of carbon atoms and hydrogen atoms only. They contain no heteroatoms and no aryl groups.

The Janssen disclosure neither teaches nor suggests the presently claimed branched olefin copolymers. Accordingly, withdrawal of the rejection over Janssen is respectfully solicited.

Claims 1-8 were rejected on the ground of obviousness-type double patenting over claims 1-10 of US 6,753,378 B2 (Kojoh). The rejection is respectfully traversed.

A very significant difference between the branched olefin copolymer of the present invention and the polyolefin disclosed by

Kojoh relates to the definition of the "arm-structure" in the branched polyolefin. In the present invention, the arm depicted as "Z" in formula (2) is a polymer segment containing at least one feature selected from an oxygen atom, a nitrogen atom, a halogen atom, and an aryl group. In Kojoh, the corresponding arms are olefin chains. See e.g. claim 1 of the Kojoh patent. See also column 3, lines 42-51 of Kojoh, which reads "When the composition of the olefin chain (A) and the composition of the olefin chain (B) are the same, the olefin chain (A) and the olefin chain (B) preferably have recurring units obtained from an olefin of 3 to 20 carbon atoms as main constituent units. Although the olefin chain (A) and the olefin chain (B) have recurring units obtained from an olefin of 2 to 20 carbon atoms as main constituent units, they may contain recurring units obtained from a polymerizable monomer other than the olefin of 2 to 20 carbon atoms, such as a diene." The arms of the copolymer claimed in the Kojoh patent are aliphatic groups that consist of carbon atoms and hydrogen atoms only. They contain no heteroatoms and no aryl groups.

Claims 1-10 of the Kojoh patent neither teach nor suggest the presently claimed branched olefin copolymers. Accordingly, withdrawal of the double patenting rejection over the Kojoh patent is respectfully solicited.

Applicants sincerely believe that withdrawal of the rejections of record and passage of this application to Issue is in order.

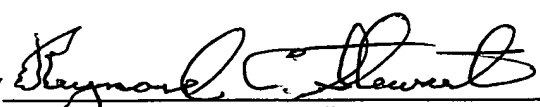
Should there be any questions concerning this application, the Examiner is invited to telephone Richard Gallagher (Reg. No. 28,781) at (703) 205-8008.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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